

ENGLISH - STREAM CROSSING STRUCTURE SURVEY REPORT

DT1698 1/2002 (Replaces EB53)

Wisconsin Department of Transportation

<input type="checkbox"/> Box Culvert	<input type="checkbox"/> Culvert Extension	<input type="checkbox"/> Right <input type="checkbox"/> Left	<input type="checkbox"/> Stream Crossing	<input type="checkbox"/> Other
Final Plan Due Date	Preliminary Plan Due Date (N/A for Culverts)	<input type="checkbox"/> Town of <input type="checkbox"/> Village of <input type="checkbox"/> City of		
New Structure Number	Highway	County	Design Project ID	
Aesthetics Level (For Levels 2, 3 & 4, Explain on Page 4) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4			Construction Project ID	
Station	Section	Town	Range	
Indicate Purpose <input type="checkbox"/> Waterway <input type="checkbox"/> Other (Describe)		Identify Stream (If Applicable)		
District Contact Person/Area Code with Telephone Number		Traffic Forecast Data		
		Design Year	Average Daily Traffic (ADT)	Roadway Design Speed
Consultant Contact Person/Area Code with Telephone Number				mph

Instructions for Structure Survey

In addition to this report, the following information shall be submitted.

1. **Small County Map** on which the location of proposed structure is shown in red and highway relocation, if any, in green.
2. **Plan and Profile Sheet** on proposed reference line of highway showing the following: (a) Ground line; (b) Finished grade line; (c) Profile grade line elevations at least every 100 feet for 1,000 feet each side of the structure; (d) Vertical curve control points; (e) Horizontal curve control points; (f) Curve data, including full SE and runoff distance.
3. **Contour Map** of the site drawn to a scale of not less than 1" = 20 feet with one-foot contours and showing the following (a) Existing highway and structure; (b) Proposed highway alignment and R/W; (c) Station numbers; (d) North point; (e) Buildings; (f) Underground facilities; (g) Other features which influence the design; (h) Recommended channel change; (i) Direction of stream flow; (j) Stations at end of existing structure; (k) Proposed structure and extent of riprap for consultant designed structures.
4. **Typical Roadway Cross Section** of proposed approaches showing the following: (a) Dimensions; (b) Slopes; (c) Type and width of surfacing or pavement; (d) Sidewalk, curb and gutter; (e) Subgrade and pavement thickness; (f) Clear zone width.
5. **Stream Cross Section** at upstream and downstream face of existing bridge and at one bridge length upstream and downstream. Surface water elevations at 1500 feet upstream and downstream of existing bridge.
6. **Original Photographs** of: (a) Existing structure; (b) Upstream and downstream structures; (c) Buildings within 100 feet of the proposed structure; (d) Unobstructed panoramic view looking upstream and downstream from proposed structure. *Air photo mosaics if available.*
7. **Proposed Location Map** showing structure location and number, one per structure when there are multiple structures on the project.
8. Attach a copy of the regulatory flood plain map (FEMA map) depicting the site.
9. For consultant designed structures - **Hydraulic Report** which may contain the following: (a) USGS quadrangle sheet showing proposed location, highway alignment and reach of river; (b) All available flood history, high water marks with date of occurrence, nature of flooding, damages and scour information; (c) Factors affecting water stages; (d) Navigation Clearance, for guidance in making report, see Chapter 8 of Bridge Design Manual; (e) Discussion of alternatives considered, factors influencing selection.

Proposed Structure

Preference for Structure Type at this Site		<input type="checkbox"/> Check here if to be determined by Central Office	
Roadway Width Between Curbs Ft.		Cross Slope on Deck or N.C. (Normal Crown) Ft./Ft.	
Sidewalks - Number		Sidewalk Clear Width Ft.	
Specify Wing Location for Beam Guard Attachment		Specify Clear Zone Width when Beam Guard not Used on Culvert	
Specify Wing Location for Surface Drain Anchors		Specify Wing Location where Bridge Barrier/Rail Continues on Roadway Approach	

YES	NO		YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Is Project in Flood Hazard Area	<input type="checkbox"/>	<input type="checkbox"/>	Structure Backfill Required
<input type="checkbox"/>	<input type="checkbox"/>	Have Soil Borings been Requested (If not, Please Explain on Page 4)	<input type="checkbox"/>	<input type="checkbox"/>	Riprap Required
<input type="checkbox"/>	<input type="checkbox"/>	Staged Construction	<input type="checkbox"/>	<input type="checkbox"/>	Lighting Required on Bridge
<input type="checkbox"/>	<input type="checkbox"/>	Temporary Structure Required	<input type="checkbox"/>	<input type="checkbox"/>	Bolt Circle Diameter _____ mm
			<input type="checkbox"/>	<input type="checkbox"/>	Camber for Barrel Recommended (Culvert only)
			<input type="checkbox"/>	<input type="checkbox"/>	Is this project on the National Highway System?

Proposed Disposition of Existing Structure

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Structure will be Removed
<input type="checkbox"/>	<input type="checkbox"/>	Bid item will be included in Structure Plan Quantities
<input type="checkbox"/>	<input type="checkbox"/>	Structure will remain in Service Structure Number

☐ Special Foundation Treatment Required - See soils Unit "Site Investigation Report"

If utilities will be carried on the structure, complete the following data.

Type	Size	Opening Size at Abutments	Weight	Pressure

For Structure Designers Use Proposed Box Culvert

Aprons	Type	Elevations
Inlet		
Outlet		
Openings - Number	Clear Span at Right Angles to Axis of Box	Inside Height of Box
Slope of Channel at Culvert		

All Proposed Structures

Spans - Number	Spans Lengths (C.L. to C.L. of Substructure)		Skew	<input type="checkbox"/> R.H.F. <input type="checkbox"/> L.H.F.
Drainage Area _____ Sq. Mi.	Q (100) _____ cfs			
High Water (100) _____ Ft.	Q (Struct.) _____ cfs		Existing Bridge	
Velocity _____ Ft/Sec.	Q (Rdwy.) _____ cfs		High Water (100) _____ Ft.	
Waterway Area _____ Sq. Ft.	Q (Suple. Struct.) _____ cfs			
Scour Code _____				
<u>Temporary Structure</u>		<u>Overtopping Frequency (If > 100 Yrs. - NA)</u>		<u>Regulatory High Water</u>
Q _____ Yr. _____ cfs.	Q _____ Yr. _____ cfs.			
High Water _____ Ft.	High Water _____ Ft.			_____ Ft.
Min. A (BR) _____ Sq. Ft.				

Existing Structures At or Near Proposed Site

STRUCTURE DATA		UPSTREAM	AT SITE	DOWNSTREAM
Structure Number (B / P / C)				
Railroad or Highway Structure				
Distance from Proposed Site in Miles				
Type:	Superstructure			
	Substructure: Abutments			
	Piers			
Is Structure Supported on Bearing Piles?				
Condition:	Superstructure			
	Substructure			
Year Built				
Number of Spans				
Clear Span (Between Inside Faces of Substructure Units) Lengths Along CL Roadway/Track				
Roadway Width Between Curbs				
Sidewalk:	Number			
	Clear Width			
	Location			
Skew:	Stream			
	Structure			
* Elevation	Finished Grade			
+ +	Low Chord			
Does Drift Pass Satisfactorily				
Does Ice Pass Satisfactorily				
Character of Material in Stream Bed				
**	Character of Drainage Basin			
Stream-Bed Scour: Visable (Y/N)				
Due to Restricted Waterway				
Due to Poor Location				
Due to Improper Skew				
Extreme High Water Elevation - Date				
Cause of High Water and Source of Information				
Low Water Elevation				
Normal Water Elevation				
Streambed Elevation				
Water Surface	Date	1500' Upstream	At Site	1500' Downstream
Elevation ***				

Existing Culvert Information

Attach Sketch

Slope of Channel at Structure (ft./100 ft.)

Elevation: Finished Grade _____
 Inlet - Invert _____
 - Top of Opening _____
 Discharge - Invert _____
 - Top of Opening _____

Spans: Number _____
 Width Normal - Barrel _____
 Allowable High Water _____
 Floor: Concrete, Earth, Silted _____
 Condition: Wingwalls _____
 Barrel _____

* Use same datum for all structures within one-half mile of proposed structure.

** Mountains, Hilly, Rolling, Flat, Swampy, Wooded, Cultivated, Pasture, etc. - Give percentage of each.

*** Measured along thread of channel.

+ + Take these elevations at the same station.

Additional Information

Elaborate on other concerns such as: DNR, Local, Aesthetics and Stage Construction

FOR BRIDGE OFFICE USE

Plans Checked By

Date